

all the other migratory species that visit us in summer takes place after a very sensible change in the temperature; but at the end of January the heat is unmitigated—it is, in fact, often greater than in the solstice. Thus the Churinche disappears nearly three weeks before the Swallows (the first birds, excepting him, to leave us); and yet he reappears simultaneously with them.

When the adults have gone, the silent young birds remain. In a month's time the sexes of these may be distinguished. After another month the males are heard at times to sing, and are frequently seen pursuing each other over the fields. It is only at the end of April, three months after the old birds have gone, that they also take their departure. How remarkable it is that so long a time should elapse between the departure of the old and of the young birds, when so many other species migrate at the same time with their offspring! The adult Churinche leaves us three weeks before the adult *Progne chalybea*, the young Churinche nine weeks after the young *P. chalybea*. The autumn cold, storms, and frosty nights seem to be the immediate cause of the young birds' departure; but in the departure of the adults migration appears to be an instinct quite independent of atmospheric changes.

4. Descriptions of some new Starfishes from New Zealand.

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Fam. OPHIURIDÆ.

OPHIOTHRIX CÆRULEA, sp. nov.

Disk pentagonal, the sides with reentering obtuse angles; radial shields naked, shagreened, the outer corner curved upwards, each pair separated by three rectangular plates, bearing one or two long tapering rough spines; centre of disk and a band between the pairs of radial shields covered with small scales, each bearing a single spine.

Rays about four times the diameter of the disk; under ray-plates cordate, with the point inwards and truncate; upper ray-plates rather broader than long, the sides produced into angles and bent down; spines arranged three in a row, longer than the breadth of the ray, tapering and strongly spinous.

Mouth-shields rhomboidal; tooth-papillæ three in a row, except the lowest, which has only two.

Colour pale blue, with a band of purplish white, edged with purplish black down the centre of the upper surface of the rays; under surface of the rays white; disk mottled with purplish; mouth-papillæ yellowish.

About 3 inches from the tips of the rays.

Two specimens are in the Colonial Museum, but without locality.

OPHIONEREIS FASCIATA, sp. nov.

Disk round ; radial shields small, half covered, parallel, distant ; scales small, larger near the margin.

Rays five to six times the diameter of the disk ; under ray-plates squarish, outer edge straight ; upper ray-plates rectangular, broader than long, outer edge concave ; spines in three or four rows, rounded, slightly tapering, about equal in length, rather longer than the breadth of the ray ; tentacle-scale large, rounded, oval.

Mouth-shields broadly ovate ; mouth-papillæ small, round, and blunt, four on each side.

Colour yellowish white, the rays banded above and below with purplish black, and the disk irregularly marked with the same colour ; mouth-shields black ; mouth-papillæ white.

About 5 inches from the tips of the rays.

Cook's Straits, on rocks below high-water mark (*F. W. H.*), and the Chatham Islands (*H. H. Travers*).

OPHIACTIS NIGRESCENS, sp. nov.

Disk rounded ; radial shields narrow, oblong, widely diverging, shagreened ; remainder of disk covered with small scales bearing short round spines, giving them a granulated appearance.

Rays about six times the diameter of the disk ; under plates broader than long, with the inner and outer margins convex, and the lateral margins concave ; upper plates wedge-shaped, the point inwards and truncate, outer margin convex ; spines four in a row, cylindrical, with blunt points shagreened, the upper one much larger than the others, and longer than the breadth of the ray.

Mouth-shields oblongo-pentagonal, the point outwards, and narrowed inwards.

Colour brownish black.

About 6 inches from ray to ray.

Several specimens are in the Colonial Museum ; but the locality is not stated.

OPHIURA CYLINDRICA, sp. nov.

Disk subpentagonal, granulated.

Rays from three to four times the diameter of the disk, scarcely tapering, and rather flattened above ; lower ray-plates longer than broad, outer edge convex ; upper ray-plates convex on the outer edge and tapering inwards, nearly as long as broad ; side plates with six equal, rather pointed, short spines, which do not cover half of the next plate.

Mouth-shields irregular, cordate or lenticular, sometimes obsolete ; side mouth-shields the same ; mouth-papillæ 6-8, the two outer ones broader.

Colour pale yellowish brown ; rays with dark brown transverse bands, edged with black, on the upper surface ; disk spotted and mottled with the same.

About 3 inches from the tips of the rays.

Two specimens are in the Colonial Museum, locality not stated.

Fam. ASTERIADÆ.

ASTERIAS MOLLIS, sp. nov.

Rays five, broad, rounded, tapering, their length between three and four times the width of the disk; spines single, acute, in longitudinal rows on the rays, but irregularly placed on the disk; about nine rows of spines on a ray, the two lowest on each side placed close to the ambulacra, the outer of the two composed of longer spines; ambulacral spines shorter, in two rows.

Diameter about four inches.

Two specimens in the Colonial Museum, with dredgings, but locality not stated.

ASTERIAS SCABER, sp. nov.

Rays seven, rounded, tapering, their length from three to four times the width of the disk; upper surface covered with granular tubercles, which have occasionally a spine in the centre; six rows of spines on each ray, the two lowest on each side placed close to the ambulacra, the upper on the side of the ray; occasionally an interrupted row of spines along the top of the rays; ambulacral spines slender, in two rows.

Diameter about 6 inches.

Two specimens are in the Colonial Museum, among dredgings, with the last, but no locality stated.

Fam. PENTACEROTIDÆ.

PENTACEROS RUGOSUS, sp. nov.

Rays as long as the disk; centre of disk and a line along each ray raised (dry); upper surface covered with flat granular plates, arranged in a row down the centre of each ray, but irregularly on the other portions; marginal shields $\frac{2}{3}$ from ray to ray, covered with minute blunt rough spines.

About 4 inches in diameter.

Allied to *P. granulatus*; but the rays are more pointed, the dorsal plates are flat-topped, and all the granules are of equal size.

Two specimens in the Colonial Museum, locality not stated.

Fam. ASTERINIDÆ.

PTERASTER INFLATUS, sp. nov.

Pentagonal, with five radiating ribs, which are ovate and swollen on the inner half, and slightly convex on the outer half; centre of disk hollowed; margin thin, sharp; back tessellated with smooth flat tubercles, getting smaller towards the margin, where they are granulated; on the rays they are large and irregularly placed, but showing a tendency to arrange themselves along the rays; lower surface with short simple blunt spines, pointing inwards; webbed ambulacral spines short, not much longer than the ambulacral spines.

Colour reddish (dry). Diameter $5\frac{1}{2}$ inches.

A single specimen is in the Colonial Museum, locality not stated.